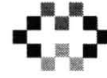




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*Archive for the Psychology of Religion* 30 (2008) 189-199



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## The Phenomenology and Potential Religious Import of States of Consciousness Facilitated by Psilocybin\*

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Received: 23 September 2007; accepted: 15 December 2007

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### Summary

Accompanying the resumption of human research with the entheogen (psychedelic drug), psilocybin, the range of states of consciousness reported during its action, including both nonmystical and mystical forms of experience, is surveyed and defined. The science and art of facilitating mystical experiences is discussed on the basis of research experience. The potential religious import of these states of consciousness is noted in terms of recognizing the reality of the spiritual, in better understanding the biochemistry of revelation, and in exploring the potentially positive contributions that mystical consciousness may effect in psychological treatment.

### Keywords

Religious experience, mystical experience, mysticism, psilocybin, states of consciousness, entheogen

It is an honor to contribute to the rebirth of research with psilocybin. In a 1966 article, entitled "Implications of LSD and Experimental Mysticism", Walter Pahnke and I stated that the greatest danger our society may face, as we come to terms with psychedelic drugs, is becoming so blinded by fears of misuse and abuse that we fail to pursue the research required to ascertain the benefits that the skilled and responsible use of these substances may provide—for individual persons, for society at large, and for new knowledge in neuroscience and psychology. Now, 41 years later, it is my hope that our accumulated knowledge concerning the science and the art of conducting research with

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\*) Presented at Symposium on "Psilocybin and Experimental Mysticism", American Psychological Association Convention, San Francisco CA, August 17, 2007. Address for correspondence: 2516 Talbot Rd., Baltimore, MD 21216-2032, Email: richards3@earthlink.net.

these substances may be carefully considered and utilized so that investigations now may move forward with a minimum of sensationalism, irresponsible behavior and irrational fears.

**A Conceptual Trap to Avoid: *Study Discrete States of Consciousness, not "a Drug Effect"***

When people first ingest psilocybin and a particular experience ensues, they often tend to assume that they have experienced a "drug effect" and now know "what psilocybin does." Like the proverbial blind men touching different parts of an elephant, each may offer a description quite at odds with others. One talks of intriguing perceptual changes; another has relived an experience from childhood; another was overcome by panic and became paranoid; another encountered scenes from a prior civilization; another saw a vision of a deity; yet another felt drawn into a mystical state of consciousness beyond his or her usual personal identity. One person giggles; another screams; another prostrates himself in profound humility and gratitude.

It is clear that psilocybin in dosage adequate to change consciousness can never be responsibly administered as a medication to be taken independent of preparation and careful attention to the powerful variables of set and setting. One cannot take psilocybin as a pill to cure one's alienation, neurosis, addiction, or fear of death in the same way one takes aspirin to banish a headache. What psilocybin *does* is provide an opportunity to explore a range of non-ordinary states. It unlocks a door; how far one ventures through the doorway and what awaits one in the realms beyond largely is dependent on non-drug variables. This knowledge is of critical importance as we design new research projects. We need to focus on the potentially life-enhancing effects of particular states of consciousness that are experienced during the action of psilocybin and that remain accessible in memory afterwards.

Although the range of experiences is broad, the responses reported by subjects do not appear random or capriciously unpredictable. Given adequate dosage and interpersonal grounding, the states of consciousness that present themselves often appear to be ingeniously designed by an intrinsic wisdom within the psyche to facilitate healing or unfolding self-actualization. Typically, the content that emerges seems more relevant and potentially beneficial than any experience the subject and guide could have imagined and designed in advance. In repeated sessions with the same volunteer and similar if not identical dosage, it is not uncommon to find a progressive and orderly mani-

festation of content (Newland, 1962; Grof, 1975), illustrative of the process philosophers call "entelechy".

As there is no "drug effect" other than the intriguing biochemical substrate that appears to trigger the opportunity to explore alternative states, so there is no such thing as "the psilocybin experience", or "the psychedelic experience." The same is true of so-called spontaneously-experienced alternative states: most of us would not speak of *the* meditative experience, *the* sensory isolation, psychotic or natural childbirth experience. Similar biochemical processes may well underlie all these forays into inner worlds. It has been posited that changes in hormonal levels and the balance of gases in blood, combined with stress, focused attention, and the natural presence of DMT (dimethyltryptamine) in our brains, may well influence neurochemistry in ways similar to the action of psychedelic drugs (Strassman, 2001).

### A Brief Survey of Nonmystical States of Consciousness

Before focusing on *mystical consciousness*, let us briefly survey some categories of nonmystical experiences facilitated by psilocybin.

Perhaps best known, as reflected in tie-dyed t-shirts and stereotypes in the popular culture, are those experiences of altered perception in various sensory modalities labeled *sensory-aesthetic experiences*. Usually associated with low dosage and/or psychological defensiveness, often in contexts lacking supportive set and setting, these experiences appear to have little or no therapeutic or spiritual import.

Responses characterized by intense anxiety, confusion and often paranoia, subsumed under the rubric *psychotic experiences*, typically occur when dosage is more substantial and adequate attention has not been paid to preparation and skillful guidance. Not feeling adequate motivation or support to confront conflicts, people try to assert rational controls to escape from their own Jungian shadows. As in the classic nightmare, the faster one runs from an aspect of oneself, the more the conflict inflates and the more anxiety escalates.

*Psychodynamic experiences*, usually associated with low dosage with a supportive set and setting, typically entail the confrontation and potential resolution of personal conflicts and/or traumas. Guilt, grief, despair or anger often becomes focal, along with abreaction and catharsis. During the 1960's, especially in Europe, these experiences were targeted in so-called "psycholytic therapy" (Abramson, 1967), in the belief that they could significantly accelerate psychotherapy.

*Cognitive experiences* tend to occur with supportive set and setting, either with low dosage or near the end of a high dose session, and often are claimed to facilitate creative processes. One may seem able to view problems from novel perspectives and more clearly see interrelationships between ideas.

*Archetypal experiences* occur on the threshold between personal and mystical states. This is a fascinating area for new exploration as it is not uncommon for subjects to report encounters with symbols or deities that have not been part of their process of enculturation, perhaps providing empirical support for Jung's "collective unconscious." Themes of great myths and world religions become manifest. Encounters with the Christ, the Buddha and Bodhisattvas, Hindu deities and Greek gods, the Wise Old Man and the Great Mother, may be reported, along with imagery of precious gemstones and metals, awe-inspiring architecture, vast landscapes, prior civilizations and cosmic panoramas. Often claims are made of having beheld visions of exquisite beauty, as though one had visited a great art museum or the realm of Platonic forms. Although the ego is still extant as the observer who beholds the vision, it subsequently may become incorporated and transcended in a unitive state, for which most scholars in the psychology of religion today would reserve the word "mystical."

### **A Definition of Mystical Consciousness (Complete & Incomplete)**

Referring now to mystical consciousness, there's a well-known verse in the *Tao Te Ching*, which reads, "Those who know do not speak; those who speak do not know." This is the point when I should stop "talking" and perhaps play music instead. However, claiming poetic license, I'll do my best to find some words as some of our forefathers have done, notably William James (1902) and Abraham Maslow (1966). In attempting to describe mystical experiences, it is common for volunteers to express a sense of futility, not only because some experiences are claimed to be ineffable and beyond the limits of language, but also because the very categories of human thinking render the experiences paradoxical. One may claim to have died, yet never felt more alive. Ultimate Reality may be described beyond the level of the personal, yet suffused with love. One may claim to have known Nothingness that contained all reality. Classical philosophical antinomies, such as the One and the Many, and Freedom and Determinism, are claimed to be encompassed in consciousness that allows for "Both/And" rather than "Either/Or."

Five additional categories usually can be found in the content analysis of reports of mystical experiences, namely, Unity, Intuitive Knowledge, Tran-

scendence of Time & Space, Sacredness, and Deeply-Felt Positive Mood. These six categories are essentially those employed by Pahnke in his classic "Good Friday Experiment" (1963), which in turn were based on the scholarship of Walter Stace (1960). Similar categories have been outlined and discussed by others in the history of the psychology of religious experience (i.e. James, 1902; Albrecht, 1951, 1958; Pratt, 1920/2005; Clark, 1958; Maslow, 1964; Masters & Houston, 1966; Wulff, 1997; Hood, 2006).

Unity, usually considered the hallmark of mystical consciousness, appears to be approached in either of two ways. With closed eyes, there are descriptions of consciousness expanding beyond the usual limits of individuality until, as Hindus express it, the drop of water merges with the ocean. This "ocean" may be called by many names, when the ego discovers the experience in memory and applies its cognitive categories to attempt to speak of it: Brahman, God, Ultimate Reality, The Ground of Being, or The Void. When approached with open eyes, the perceiver and the perceived somehow appear to resonate and recognize one another as the same ultimate form of energy, as if the sub-atomic world including oneself is experienced as quantum physicists have theorized, and consciousness is illumined by an awareness that "All is One." As academics fond of making fine cognitive distinctions, there are those who would distinguish between unity with content and without content, or seek nuances of meaning between religious concepts such as nirvana, samadhi, satori, wu-wei or the beatific vision. Yet it appears probable that pure phenomenological experiencing precedes linguistic attempts to categorize. Now that we are learning to catalyze these profound experiences with psilocybin as well as with non-drug procedures (Grof, 1988, Wallace, 2007), it is possible for the same volunteer to experience similar states on repeated occasions and report back to us as best he or she can. This of course opens up research possibilities that were impossible when the study of mysticism was limited to scrutiny of writings by such persons as Shankara, Plotinus, Meister Eckhart and St. Teresa of Avila.

As William James observed, although mystical consciousness may entail profound emotions, it also includes intuitive knowledge—James called it "the noetic quality" (1902). This aspect could well prove to be the nexus of its therapeutic potential in the treatment of addictions, depression and anxiety. You may recall the three categories of experiencing that Rudolf Otto (1932) labeled, the irrational, the rational and the nonrational. It is this third category that concerns us here.

What then is claimed to have been intuitively known? Four truth claims are most common. First is that ultimately somehow all is well, that we are part of

an infinitely greater reality that, as expressed in the Christian *Gloria Patri*, was in the beginning, is now, and ever shall be—a “world without end”, eternal and infinite, the awareness of which quells human anxieties as we move through time from birth until death.

Second, mystical consciousness often is claimed to include knowledge that consciousness is indestructible, that the mysterious energy that we are never gets lost. This awareness has been found to correlate positively with decreased fear of death in terminally-ill persons (Richards et al., 1977).

Third, within the ultimate unity, a “web of being” often is reported in which all persons are felt to be interconnected. Hindus may speak of the bejeweled net of Indra; Christians may talk of the Brotherhood of Man. It is conceivable that such consciousness could constitute a fatal blow to an addict’s feeling of alienation and also might provide a path for reclaiming and advancing a sense of ethics and rejoining the human family.

Fourth, are claims of incredible and perhaps absolute beauty. Memories often include so-called “divine architecture”, such as high gothic vaulting, Islamic domes with intricate, symmetrical patterns, or crystalline gemstones imbued with light. Jeremy Narby has suggested that such awareness may relate to cellular or genetic structures within our nervous systems (1998). These visionary structures initially appear to be beheld and approached by the ego; then, as mystical consciousness reveals itself, the ego becomes part of the pattern, and the divine architecture typically is felt to be alive and the essence of Being Itself. Whatever their origin, people remember such experiences as awesomely magnificent. Knowing that such sublime beauty is to be found within one’s own psyche makes it difficult to retain a self-concept of worthlessness—yet another reason why an experience of mystical consciousness may prove helpful to one recovering from depression or an addiction. Admittedly, the healthy skeptic cannot help but inquire whether these noetic insights, however meaningful and convincing, may be powerful delusions; those who remember such experiences, however, tend to trust their validity, perhaps because their sheer intensity is recalled as “more real” than our baseline awareness in everyday life.

The category, “Transcendence of Time and Space” refers not only to a lack of awareness of time or an altered experience of time, but quite literally to transcendence, as though an eternal or infinite perspective provides a pinnacle from which history may be viewed. It is not uncommon for volunteers to claim to have experienced phases of evolution or scenes of other civilizations. As formulated by Kant and Einstein, time and space may be seen as concepts of our cognitive faculties that organize perceptions and orient us in everyday existence, but not as attributes of ultimate reality.

The category of "Sacredness" captures the feelings of awe that imbue the ego as it approaches mystical consciousness as well as the intrinsic beauty of the inner realms encountered. "Deeply-Felt Positive Mood" expresses the Hindu concept of *lila*, or divine play, and joy, peacefulness and love, not merely as transient feelings, but also as attributes of ontological import.

In summary, then, "mystical consciousness" is defined as a state of human experience that, when retrospectively expressed, typically can be found to entail expressions of ineffability, unity, intuitive knowledge, transcendence of time and space, sacredness and profoundly positive mood. It may be useful to distinguish between threshold and full experiences, perhaps labeled "incomplete" and "complete", the more complete experiences including greater awareness of unity, intuitive knowledge and transcendence of time and space. In our attempt to document the occurrence of such states psychometrically (ludicrous as that may appear from a spiritual perspective), we have used the Mystical Experience Questionnaire with the core items for each of these categories formulated by Walter Pahnke (Turek et al., 1974), along with Ralph Hood's "M-Scale", which also builds upon the work of Stace (Hood et al., 1990, 2001).

### **The Science and Art of Facilitating Mystical Consciousness**

If, among the many different states of consciousness that can occur during the action of psilocybin, mystical consciousness not only is the most profoundly meaningful, but perhaps also the most potent catalyst of positive behavior change, what then can we do to increase the probability of its occurrence? As religious scholars are right to remind us, such sacred events always are experienced as gifts received and never as feats of the ego to be attained. Nevertheless we can articulate seven factors that foster their occurrence.

First is the primacy of unconditional trust, perhaps the most important factor of set and a quality that must be supported in the interpersonal and physical setting. This attitude is not apathetic, but paradoxically entails the conscious decision of a strong and mature ego to surrender itself to the unfolding stream of experiences. For those with a religious background, this act of trust may be enhanced with expressions of devotion or *Bhakti*, as the ego gives itself freely to a personal manifestation of divinity, whether the Christ or the Hindu *Ishwara*, or more abstractly to the ultimate Source of Being, however conceptualized.

Second, building on the first, is an attitude of openness, honesty and curiosity, a spirit of adventure that supersedes normative desires of the ego to censor,

be cautious, and exert control. Usual “thinking” during the intense action of psilocybin often constitutes an ego defense and tends to generate anxiety and paranoia.

Third is an affirmation of courage and a willingness to accept suffering as part of the process of growth. The road to heavens within often leads through personal hells as expressed in classical mysticism in the concept of Purgation. One must be willing to approach one’s inner conflicts or demons, to “look the dragon in the eye”, to genuinely seek experiential understanding and acceptance.

Fourth is the importance of being grounded in a trusting and respectful relationship with another person. A fifth factor relates to the knowledge and skills of the researchers or guides and application of safety guidelines (Johnson et al., 2008). Sixth, is the importance of adequate, though not excessive, dosage—a variable we currently are bringing into sharper focus in a dose-response study at Hopkins. A seventh factor may relate to the knowledgeable provision of nonverbal structure as afforded by music (Bonny & Pahnke, 1962).

### **The Potential Religious Import of Mystical and Archetypal Experiences**

In conclusion, here are a few words about the potential religious import of mystical and archetypal states of consciousness. Three areas of expanding knowledge especially merit the serious attention of scholars who study the interface between psychology and religion.

#### *Recognizing the Reality of the Spiritual*

Most profoundly, mystical and archetypal experiences awaken persons to the reality of the spiritual dimension of life, sometimes expressed as awareness that in everyday living we actually are spiritual beings who are having physical experiences. As His Holiness, the Dalai Lama, in his respectful dialogues with scientists, reminds us, “The view that all mental processes are necessarily physical processes is a metaphysical assumption, not a scientific fact”, and that current neuroscience does not have “any real explanation of consciousness itself” (2005). You may recall Maslow’s concluding words in *The Psychology of Science*: “Science at its highest level is ultimately the organization of, the systematic pursuit of, and the enjoyment of wonder, awe, and mystery” (1966, p. 151).



### *Recognizing the Biochemistry of Revelation*

There is a fascinating academic frontier where the disciplines of neuroscience, ethnobotany and the psychology of religion converge that focuses on the biochemistry of revelation and the origins of world religions. It has been posited that the ancient seers who wrote the Rig Veda and extolled the sacredness of *soma* were experientially familiar with the effects of a mushroom, perhaps *amanita muscaria* (Wasson, 1969, Smith, 2001), as were members of early cults that contributed to the formation of Judaism and Christianity (Allegro, 1970). Plato allegedly participated in the Elusinian Mystery Religion where sacred mushrooms were used as a sacrament (Wasson et al., 1996, Wasson et al., 1998, Ruck, 2006). Some of these theories have been questioned (Letcher, 2007), especially when the claims are understood to imply that most religion is mushroom-generated, rather than that mushroom use may constitute one technology for evoking revelatory experiences that are similar, if not identical, to those that occur through so-called spontaneous alterations of brain chemistry.

### *Recognizing the Role of Mystical Consciousness in Psychological Treatment*

Finally, in the wake of mystical consciousness, one does not discover that one has been transformed into a saint. Clearly, there is a vast difference between religious experiences and religious lives (Smith, 2001)—just as there is a distinction between psychological insights and highly developed states of self-actualization. The challenge to us when any profound experience occurs is to integrate it constructively into our everyday lives.

Though the opportunity and work of integration await one after mystical consciousness, many volunteers who experience such states do report an impetus towards positive behavior change. Our first study at Hopkins provided some data that support this, both at two and fourteen months following sessions with psilocybin (Griffiths et al., 2006, 2008).

Research with psychedelic drugs in the treatment of alcoholism, narcotic addiction, severe neuroses, and distress in the terminally ill that offered promise in the 1960's and early 1970's before this fascinating research trajectory was rendered dormant, is now beginning again in various settings in the United States and Western Europe. It is our hope that new studies will steadily proceed with experimental designs of high quality, well-grounded researchers and a lack of sensationalistic publicity. Though substances like psilocybin cannot be expected to "cure addiction" or other human ills simply by swallowing a prescribed pill, if administered with sensitivity to set and setting, they may

occasion states of consciousness that could well provide a fulcrum for changes in self-concept, perception of others and the world, and motivation that could constitute a significant contribution to successful treatment. Further, beyond potential applications in medical treatment, these states of consciousness may provide experiential insights into neuroscience and enable us to better comprehend the mysteries of our own being.

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